April 6, 2016

BY ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, GN Docket No. 14-177, IB Docket Nos. 15-256 and 97-95; RM-11664; and WT Docket No. 10-112

Dear Ms. Dortch:

On April 5, 2016, representatives of AT&T and EchoStar Satellite Operating Corporation, Hughes Network Systems, LLC and Alta Wireless, Inc. (collectively "EchoStar") met with staff of the Commission's Wireless Telecommunications Bureau, International Bureau, and Office of Engineering and Technology to discuss the above-captioned proceeding. A full list of attendees at this meeting is attached hereto as Exhibit 1.

In this meeting, AT&T and EchoStar presented a potential framework for sharing the 28 GHz band and the 37.0-40.0 GHz band among Fixed-Satellite Service licensees ("FSS") and new Upper Microwave Flexible Use ("UMFU") licensees. The framework, outlined in Exhibit 2 and provided at the meeting, promises to achieve three primary goals: 1) protect existing FSS licensees and provide them co-primary status with new UMFU licensees; 2) establish protection zones in the urban cores of key metropolitan areas to prevent potential interference to UMFU systems from new FSS installations; and 3) establish a set of coordination guidelines and parameters that allows FSS and UMFU licensees to fairly share the spectrum outside of the protection zones.

While details of the coordination, safe harbor and aggregate interference guidelines are still being developed, AT&T and EchoStar believe that this framework will enable both satellite and mobile services to make intensive and productive use of these valuable spectrum resources in a manner that does not unduly restrict the development of either service.

Respectfully submitted,

/s/ Stacey Black

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/s/ Jennifer Manner

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Attachments
cc: Attendees on Exhibit 1

EXHIBIT 1

Meeting Attendees

Wireless Telecommunications Bureau
- Charles Oliver
- Brian Regan
- Chris Helzer
- Blaise Scinto
- Catherine Schroeder
- John Schauble
- Simon Banyai
- Stephen Buenzow (by phone)
- Tim Hilfiger (by phone)
- John Wilkins (by phone)
- Nancy Zaczek (by phone)

International Bureau
- Mindel de la Torre
- Jose Albuquerque
- Nese Guendelsberger (by phone)

Office of Engineering and Technology
- Michael Ha
- Bahman Badipour
- Serey Thai

AT&T
- Stacey Black
- Neeti Tandon
- Jack Wengryniuk

EchoStar
- Jennifer Manner
- Alexander Gerdenitsch
- Bill Wiltshire

EXHIBIT 2

FRAMEWORK FOR MOBILE AND SATELLITE SPECTRUM SHARING

28 GHz Band

- Existing/Licensed Fixed-Satellite Service ("FSS") Earth Stations and a New Upper Microwave Flexible Use ("UMFU") Licensee:

  - Individually-licensed FSS earth stations already in existence or applied for by the time of the UMFU auction are co-primary with UMFU licensees.
  - UMFU licensee must design network to accept interference from these individually-licensed FSS earth stations
  - FSS operators are permitted to add individually-licensed FSS earth stations to existing facilities.

- UMFU Licensee Accommodation of Post-Auction FSS Deployment:

  - UMFU operators shall deploy their networks in accordance with their business plans and FCC build-out requirements.
  - FCC rules to limit deployment of future individually-licensed FSS earth stations to outside "urban core" areas, as defined in the attached Addendum.
    - Outside of identified urban core areas, FSS individually-licensed earth station licensees and UMFU licensees will share co-primary status and engage in good faith coordination for siting of new individually-licensed FSS earth stations.
    - Guidelines will be agreed to and submitted in the record on what constitutes good faith coordination, including safe harbor arrangement for future FSS deployments.
    - Within identified urban core areas, FSS may deploy on a secondary basis.
  - UMFU licensee must respond to coordination request in good faith and cannot demand financial consideration from FSS operator (except for expense incurred as a result of the coordination, if any – for example, to reimburse costs of network modifications taken at the request of FSS operator to accommodate new deployment).

37-40 GHz Band

- Band Design:

  - 37 GHz and 39 GHz bands to be combined for 3 GHz of contiguous bandwidth (from 37.0-40.0 GHz).
  - UMFU use permitted throughout the new band.
  - One gigahertz of the new band (specifically 39.0-40.0 GHz) to be identified as "preferred channels" for new individually-licensed FSS earth station deployments, and UMFU licensees in those channels would be required to accommodate these new FSS deployments upon request, as outlined below, and afford co-primary status.
  - FSS deployments in the 37.5-39.0 GHz portion of the band allowed on a secondary basis.

- Licensed FSS Receive Earth Stations and a New UMFU Licensees in the 39.0-40.0 GHz Band:

  - Individually-licensed FSS receive facilities will be identified at the time of the UMFU auction and provided with protection via an agreed-upon coordination zone with co-primary status around the facility.
  - UMFU licenses auctioned subject to known FSS licensees.
  - UMFU licensee must design network within agreed-upon coordination zone to protect FSS facility consistent with coordination agreement.

- UMFU Licensee Accommodation of New Satellite FSS Deployment in the 39.0-40.0 GHz Band:

  - FCC rules to limit deployment of future individually-licensed FSS earth stations to outside "urban core" areas, as defined in the attached Addendum.
    - Outside of identified urban core areas, FSS individually-licensed earth station licensees and UMFU licensees will share co-primary status and engage in good faith coordination for siting of new individually-licensed FSS earth stations.
    - Guidelines will be agreed to and submitted into the record on what constitutes good faith coordination, including safe harbor arrangement for FSS deployments.
    - Within identified urban core areas, FSS may deploy on a secondary basis.
  - New FSS receive deployments are entitled to coordination zone protection (co-primary status), as agreed to by the parties, necessary to protect satellite receivers
  - FSS operators must engage in good faith coordination with UMFU licensee to take account of existing and planned UMFU deployments in license area
  - UMFU licensee must respond to coordination request in good faith and cannot demand financial consideration from FSS operator (except for expense incurred as a result of the coordination, if any – for example to reimburse costs of network modifications taken at the request of FSS operator to accommodate new deployment).

ADDENDUM

Urban cores. The table below defines those areas ("urban cores") where FSS earth station deployment would be restricted. This urban core definition would be utilized for the area where UMFU licensees are primary and FSS licensees are secondary for both the 28 GHz band (27.5-28.35 GHz) and the preferred channels for FSS deployment in the 37-40 GHz band (limited to 39-40 GHz; FSS would be secondary as well in 37.5-39.0 GHz in all areas).

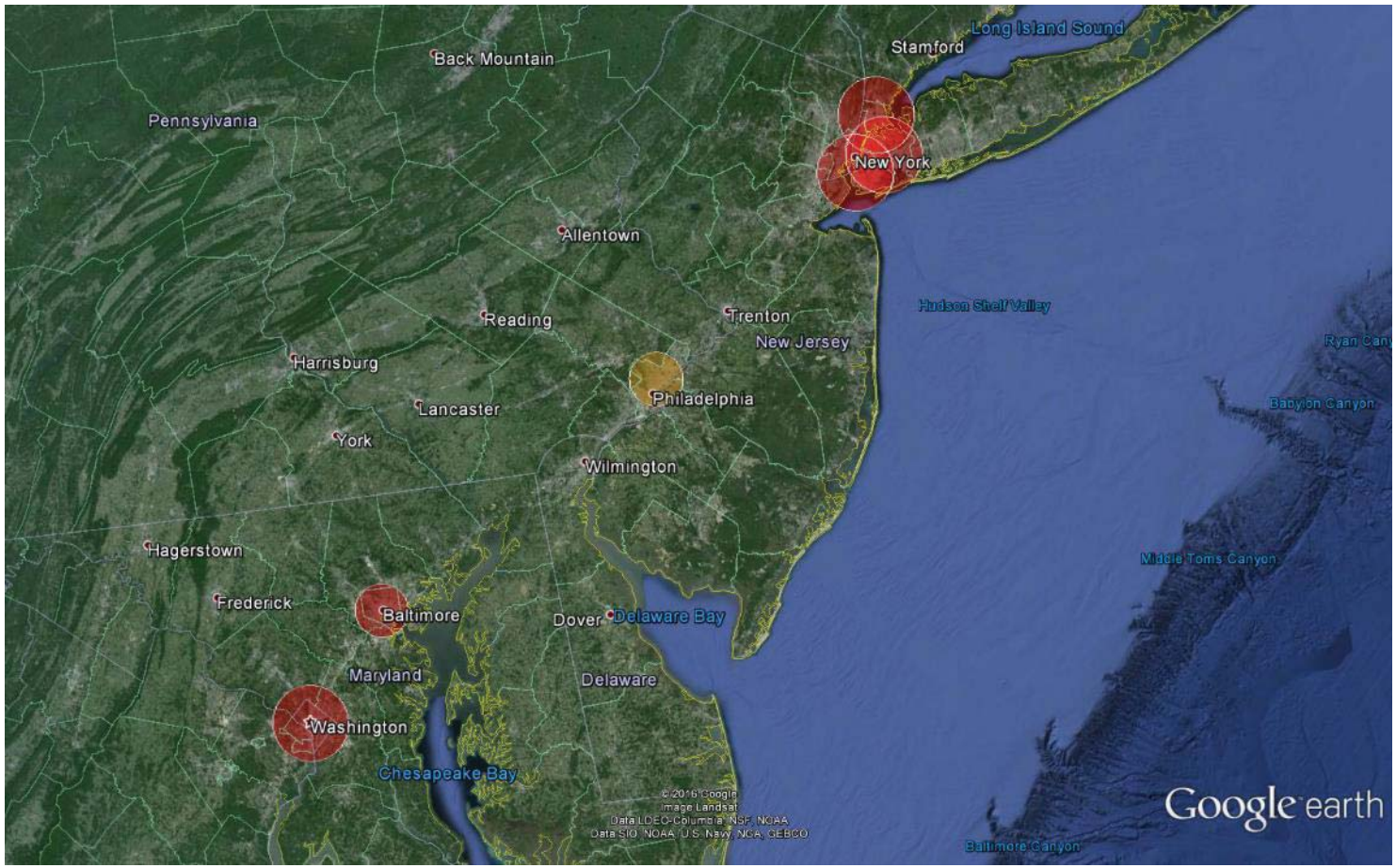
City	Longitude	Latitude	Radius (mi)
New York, NY	-73.868	40.85666	10
New York, NY	-73.8625	40.7035	10
New York, NY	-74.0161	40.65424	10
Los Angeles, CA	-118.489	34.13885	10
Los Angeles, CA	-118.208	34.11036	10
Los Angeles, CA	-118.307	33.97743	10
Los Angeles, CA	-118.185	33.835	10
Los Angeles, CA	-117.886	33.74954	10
Los Angeles, CA	-117.771	33.67137	10
Chicago, IL	-87.6852	41.91277	10
San Francisco, CA	-122.378	37.78215	10
San Francisco, CA	-122.24	37.63602	10
San Francisco, CA	-122.088	37.47337	10
San Francisco, CA	-121.926	37.32497	10
Baltimore, MD	-76.6189	39.2895	7
Washington, DC	-77.0362	38.90163	10
Philadelphia	-75.139	40.00419	7
Boston	-71.068	42.33205	7
Dallas	-96.7871	32.81516	7
Fort Worth	-97.3433	32.74955	7
Miami	-80.3003	25.76239	7
Houston	-95.4431	29.77929	10
Atlanta	-84.3888	33.79398	5
Detroit	-83.1101	42.3873	7
Cleveland	-81.6491	41.46988	5
Phoenix	-112.088	33.51522	7
Mesa	-111.757	33.41274	7
Seattle	-122.327	47.60569	7
Minneapolis	-93.3073	44.99572	5
San Diego	-117.129	32.79479	7
Portland	-122.652	45.50392	5
Denver	-104.974	39.75463	7
Sacramento	-121.437	38.56247	7
Las Vegas	-115.183	36.15023	7
San Antonio	-98.5322	29.4795	7
Jacksonville	-81.6355	30.29004	7
Kansas City	-94.5542	39.09859	7

Indianapolis	-86.1375	39.79521	7
Nashville	-86.7805	36.13374	5
Virginia Beach	-76.0976	36.825	7
Fresno	-119.788	36.77704	5
Austin	-97.7631	30.30681	7
New Orleans	-90.0656	29.97171	7
Columbus	-82.988	39.99866	5
Milwaukee	-87.9646	43.05331	5
Oklahoma City	-97.5282	35.46238	5
Charlotte	-80.8162	35.20615	7
Raleigh	-78.6422	35.82606	7
Louisville	-85.6922	38.19983	7
Tucson	-110.939	32.24249	7

Exhibit III

Maps of Selected Urban Cores

New York, Washington, Baltimore, Philadelphia



LA & San Diego


Bakersfield
Lancaster
Victorville
Santa Clarita
Oxnard
Thousand Oaks
Santa Cruz Island
Anacapa Island
Dume Canyon
Los Angeles
Pomona
Riverside
Palm Springs
Long Beach
Irvine
Temecula
Santa Catalina Island
San Nicolas Island
Catalina Escarpment
Escondido
San Clemente Island
San Diego
Yuma
Mexicali
Coronado Escarpment
Northeast Bank
Blake Knolls
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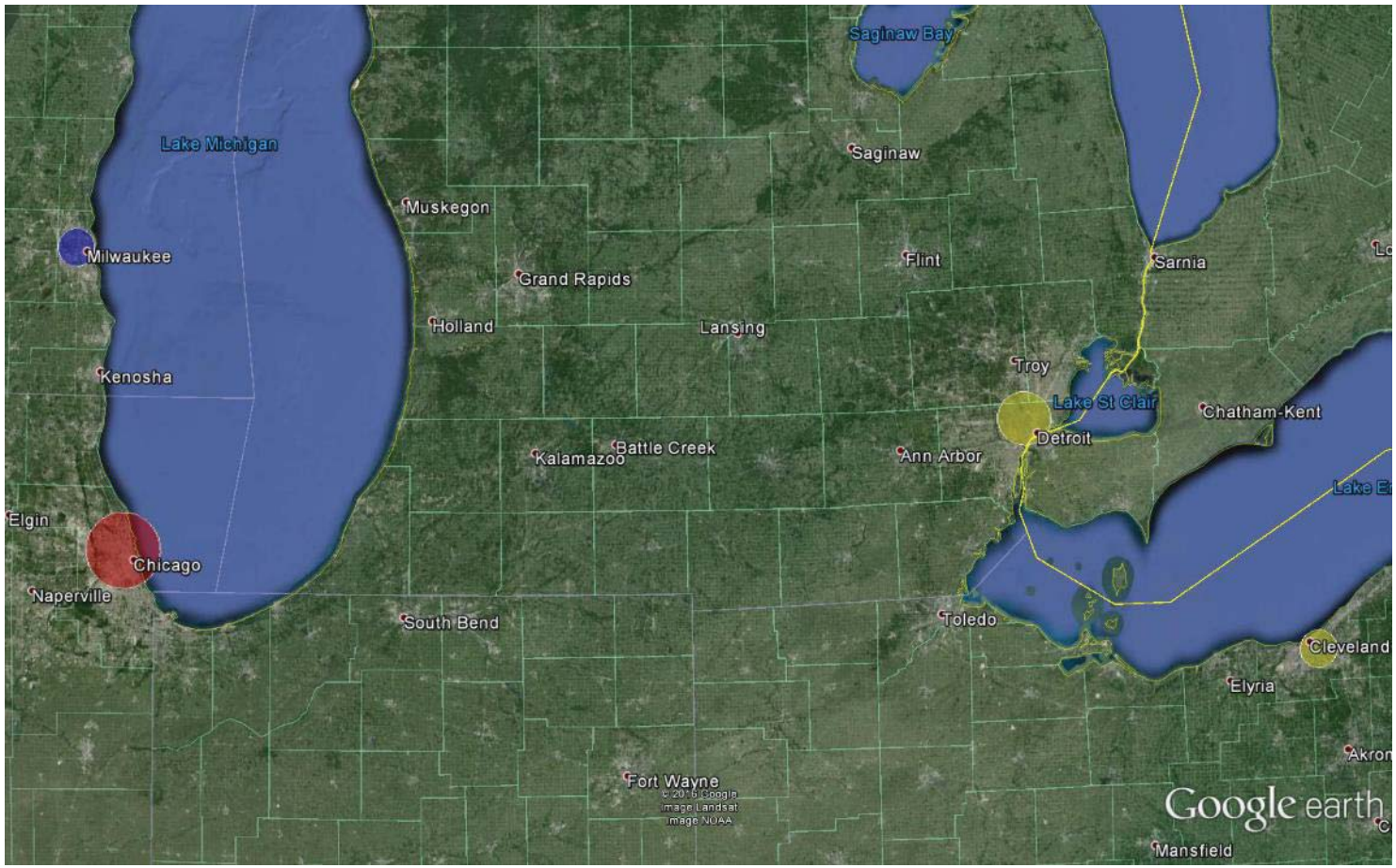
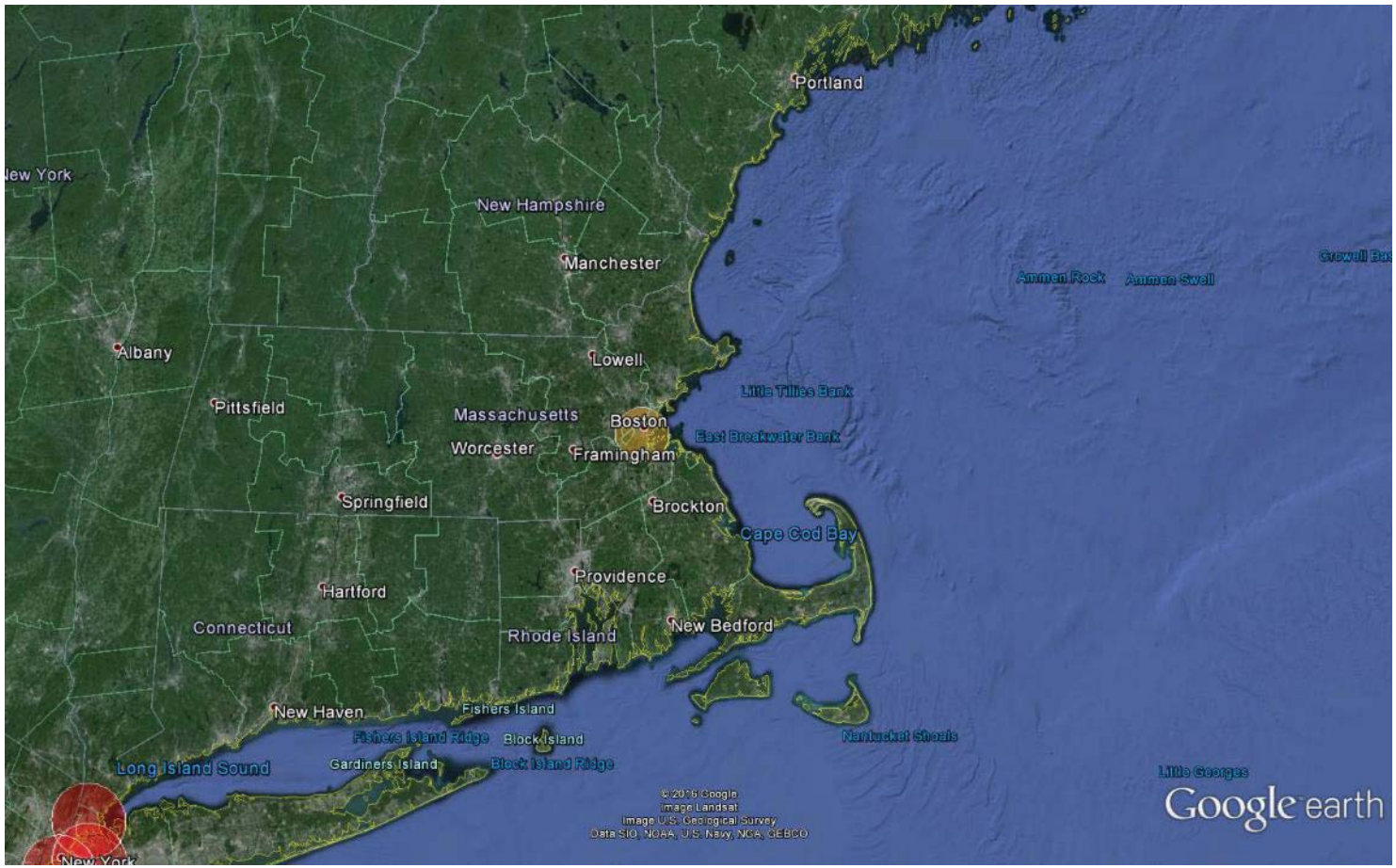
Data LDEO-Columbia, NSF, NOAA
Google earth

Chicago, Milwaukee, Detroit, Cleveland



San Francisco, Sacramento, Fresno

Boston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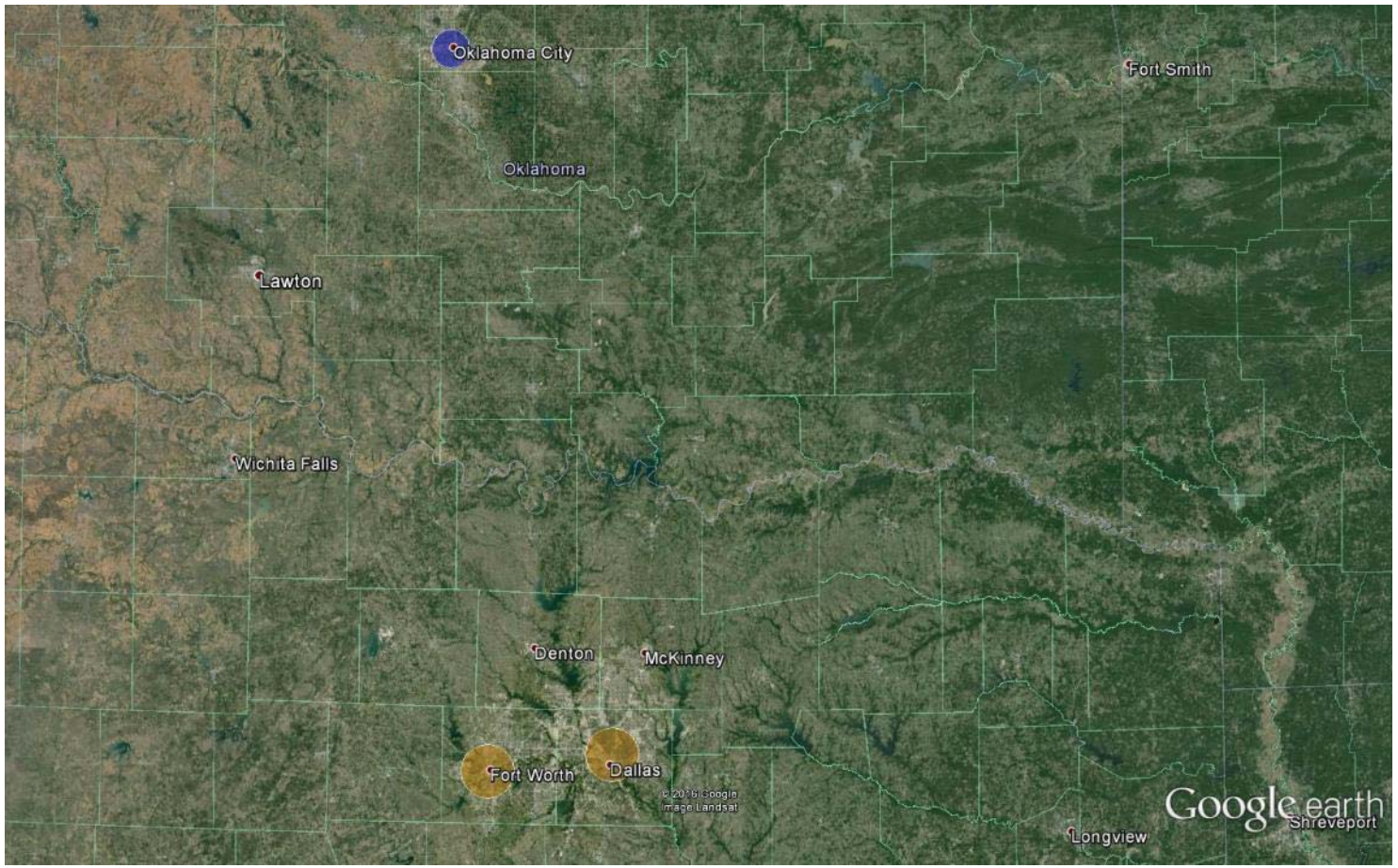
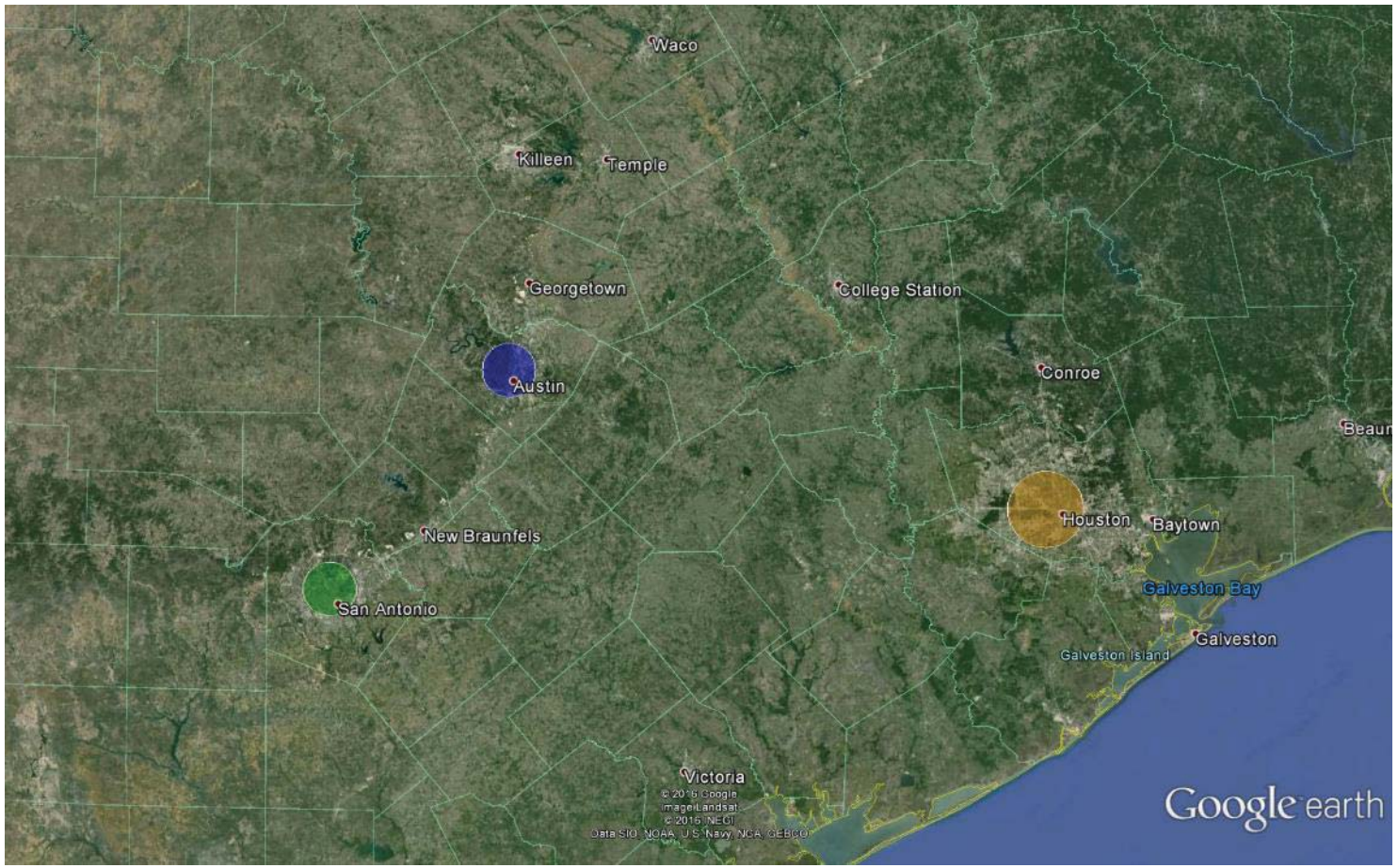
New Hampshire
Manchester
Albany
Lowell
Pittsfield
Massachusetts
Boston
Worcester
Framingham
Springfield
Brockton
Cape Cod Bay
Providence
Hartford
Connecticut
Rhode Island
New Bedford
New Haven
Fishers Island
Block Island
Long Island Sound
Gardiners Island
Ammen Rock
Ammen Swell
Little Georges
Google earth

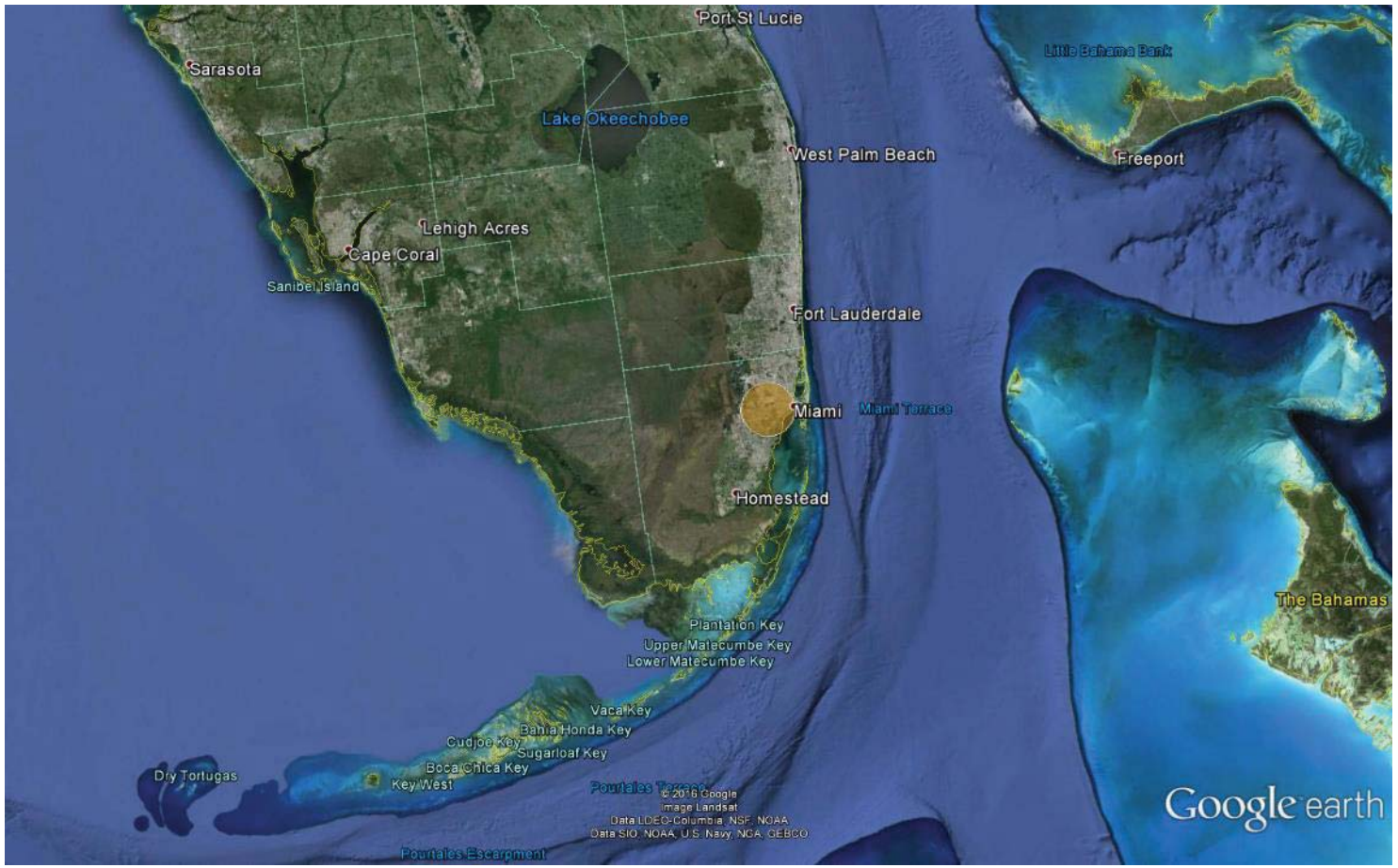
Dallas, Ft. Worth, Oklahoma City



Houston, Austin, San Antonio



Miami


Port St Lucie
Sarasota
Lake Okeechobee
West Palm Beach
Freeport
Lehigh Acres
Cape Coral
Sanibel Island
Fort Lauderdale
Miami
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Homestead
The Bahamas
Plantation Key
Upper Matecumbe Key
Lower Matecumbe Key
Vaca Key
Bahia Honda Key
Cudjoe Key
Sugarloaf Key
Boca Chica Key
Key West
Dry Tortugas
Pourtales Terrace
Pourtales Escarpment
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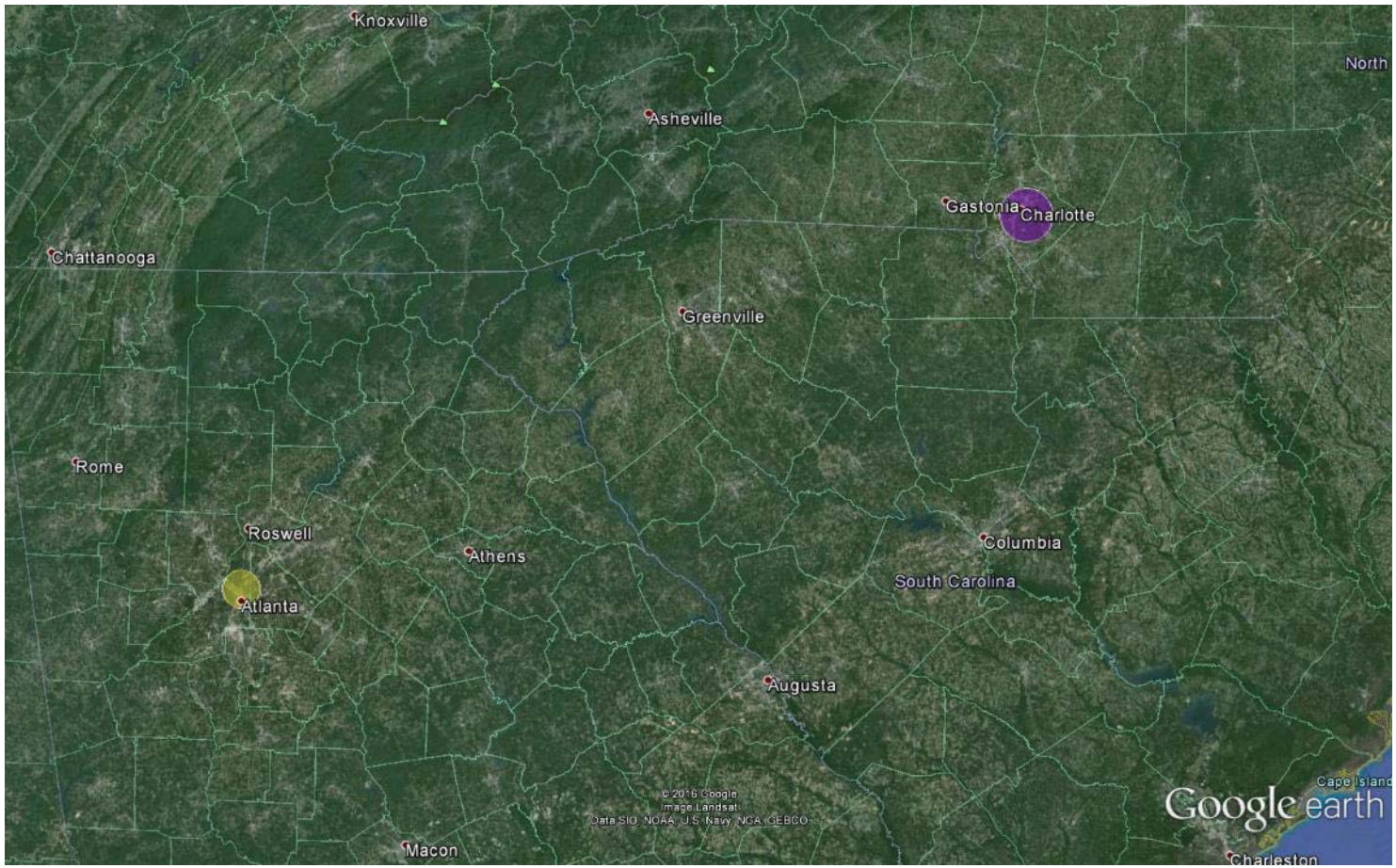
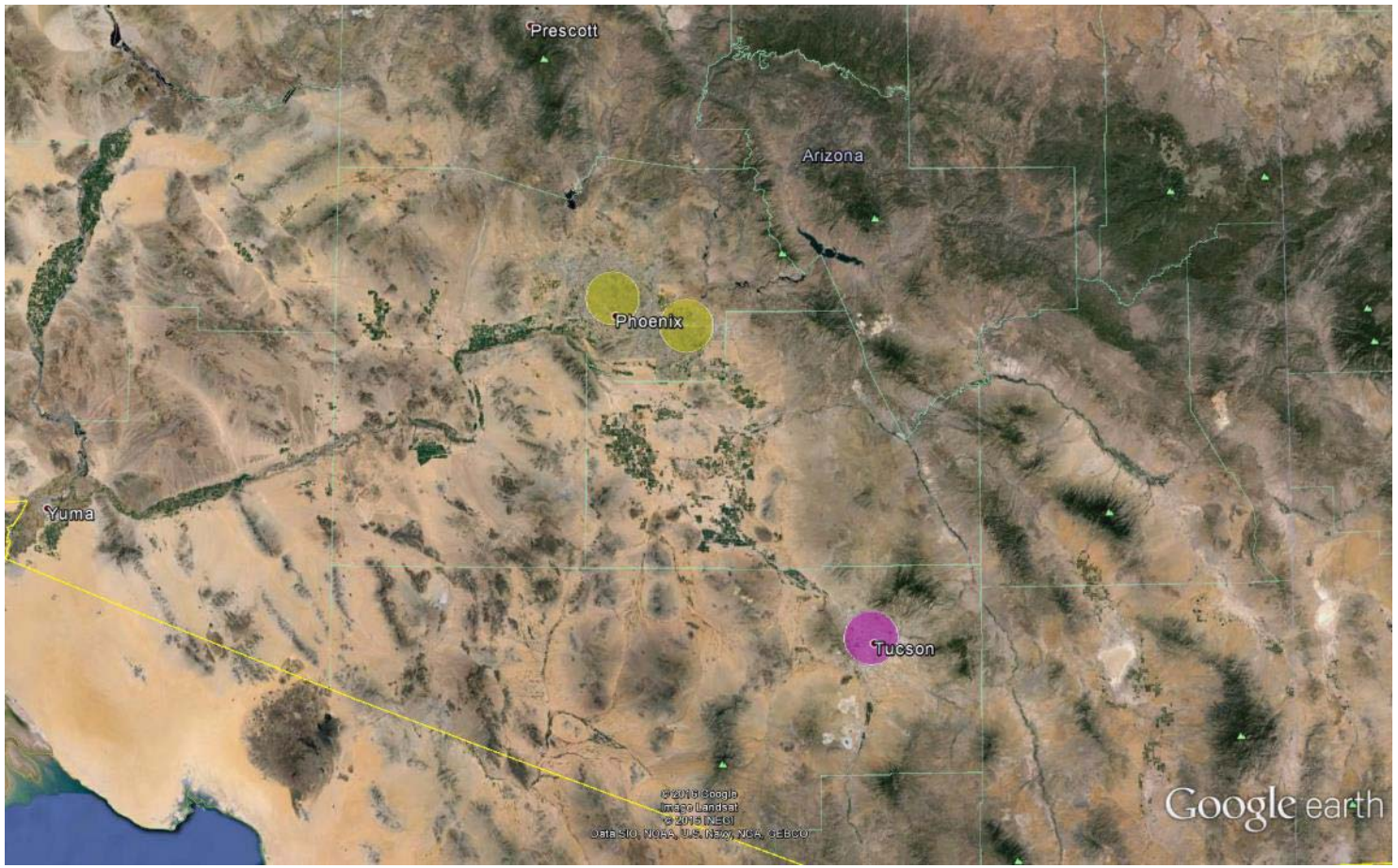
Data LDEO-Columbia, NSF, NOAA
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Google earth

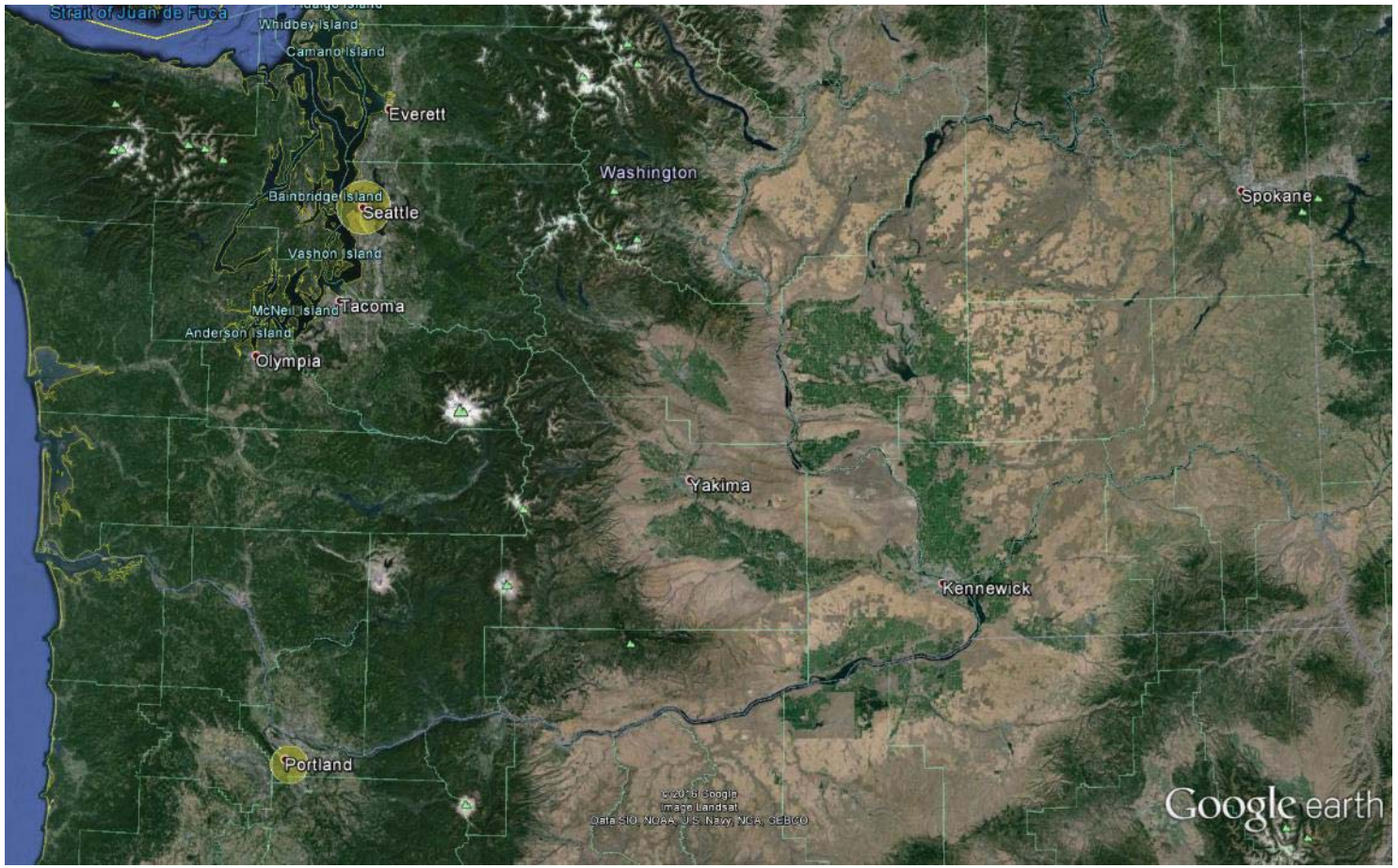
Atlanta, Charlotte



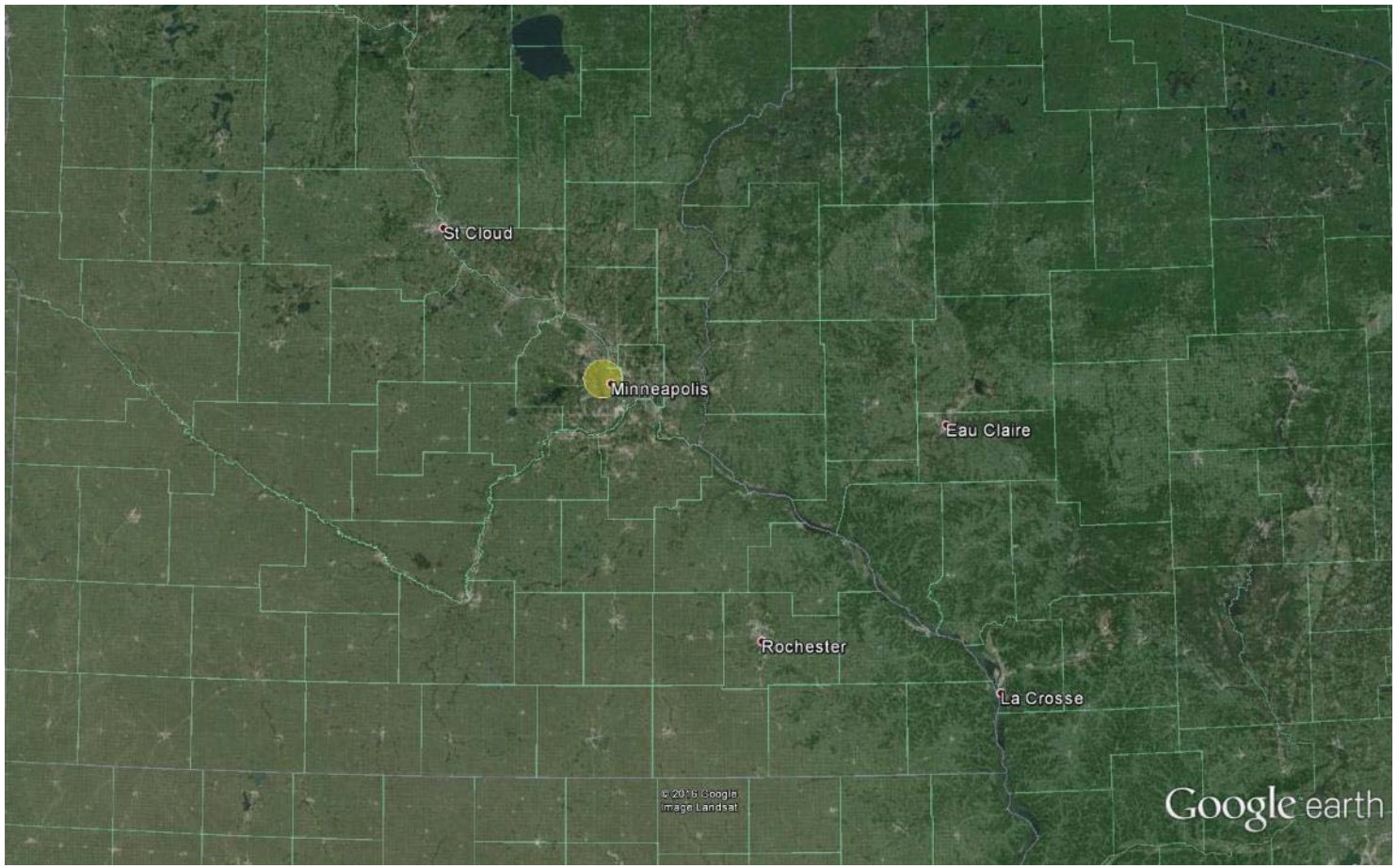
Phoenix, Mesa, Tucson



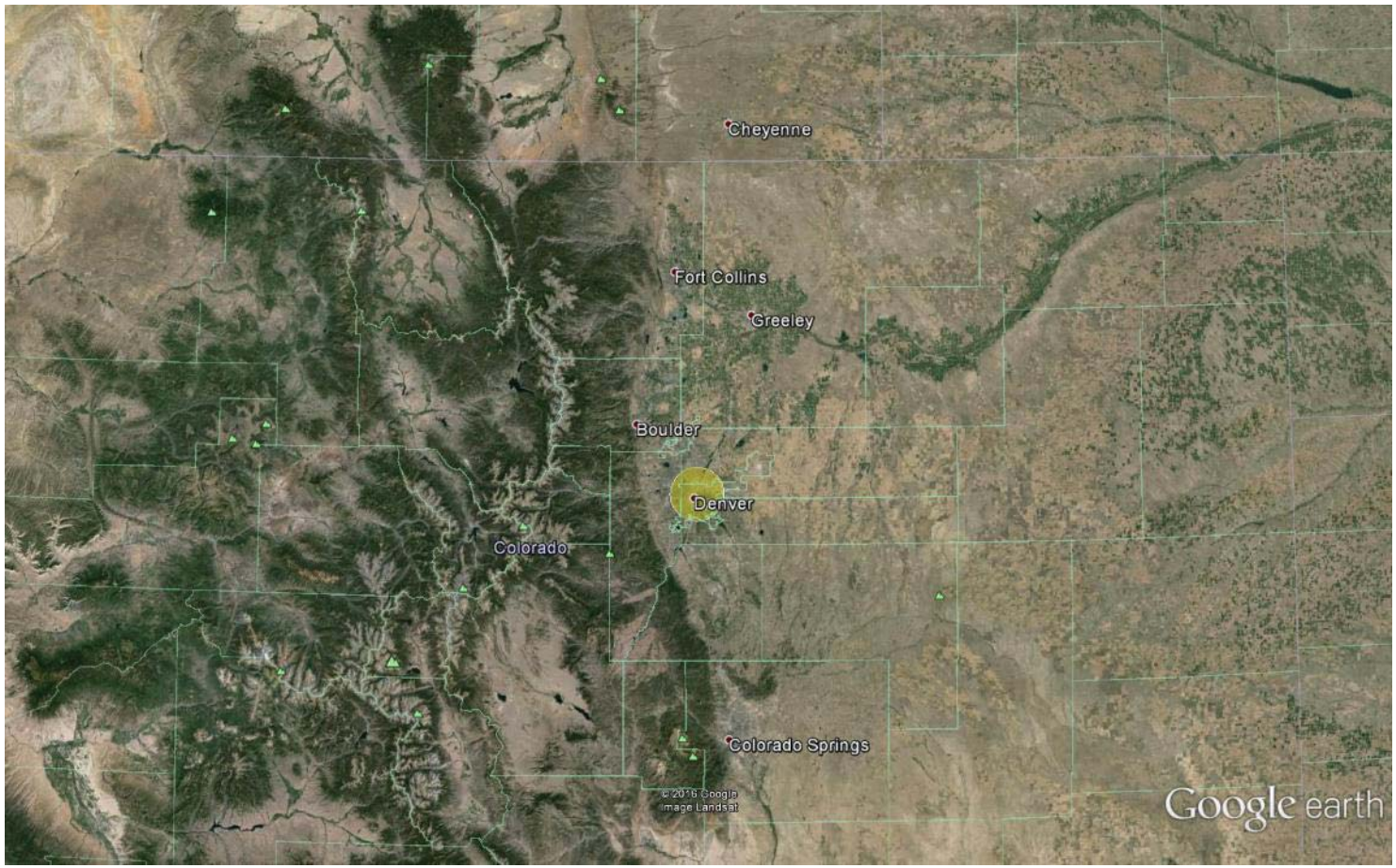
Seattle, Portland



Minneapolis



Denver


Cheyenne
Fort Collins
Greeley
Boulder
Denver
Colorado
Colorado Springs
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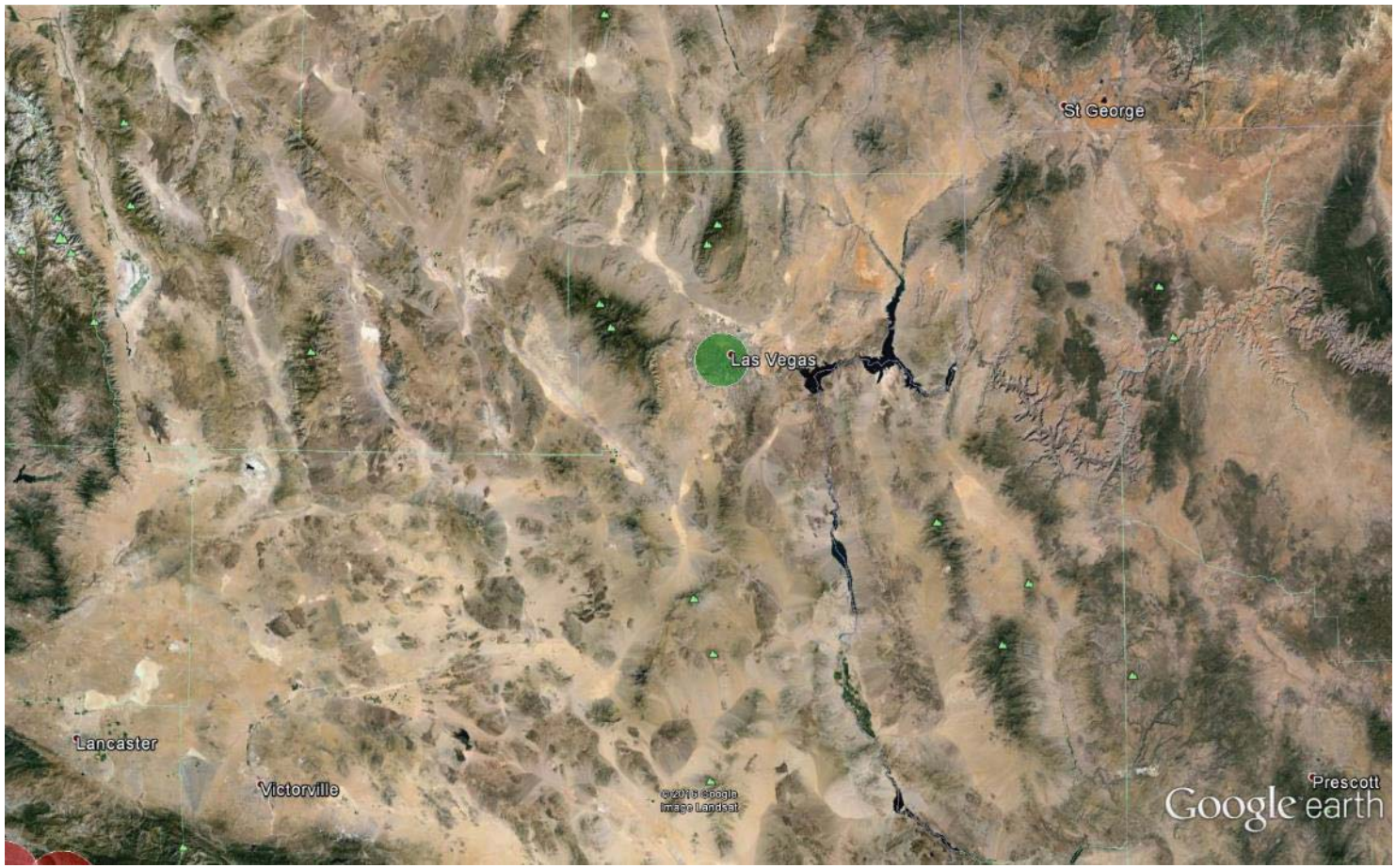
Las Vegas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Las Vegas
Lancaster
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Prescott
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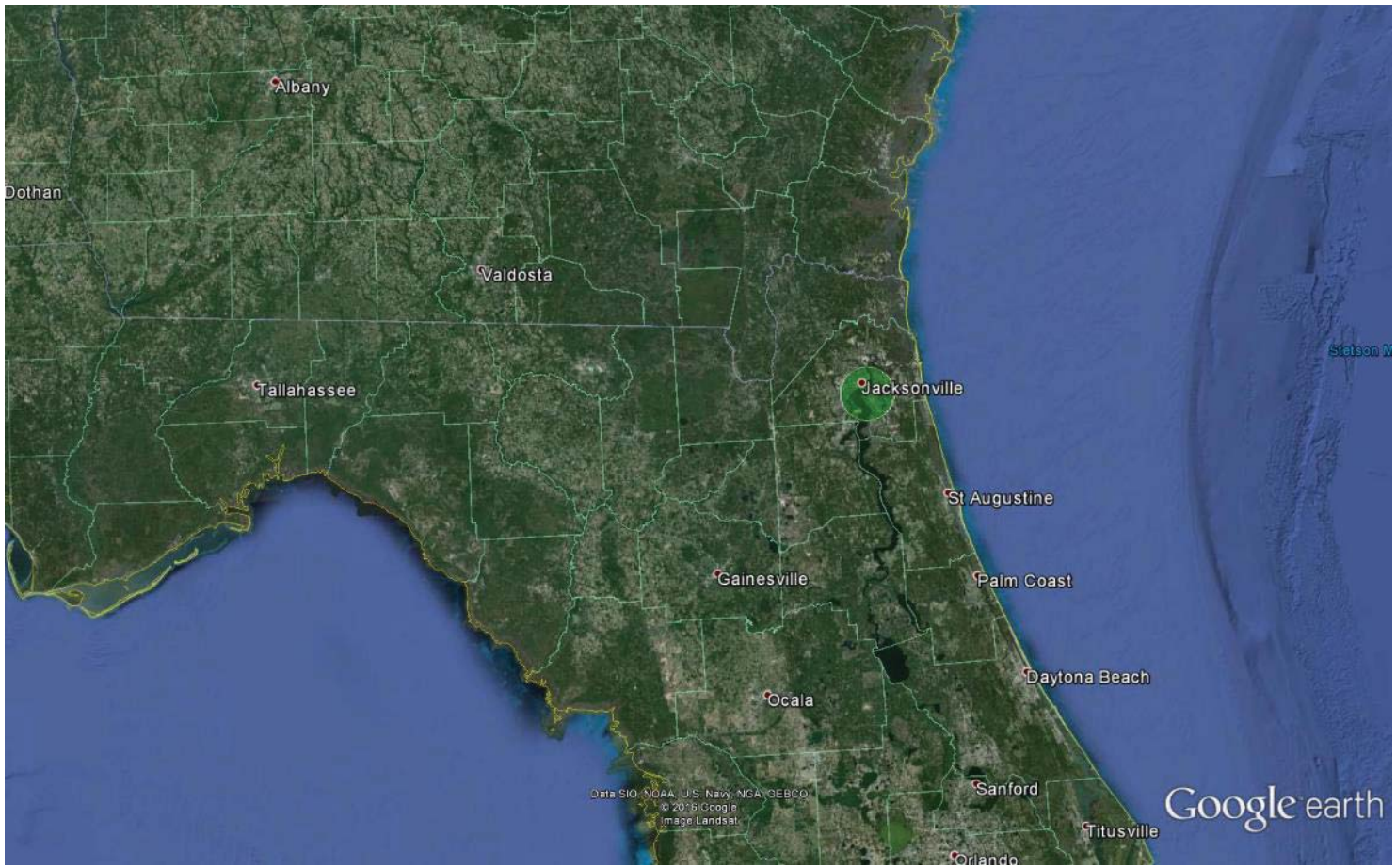
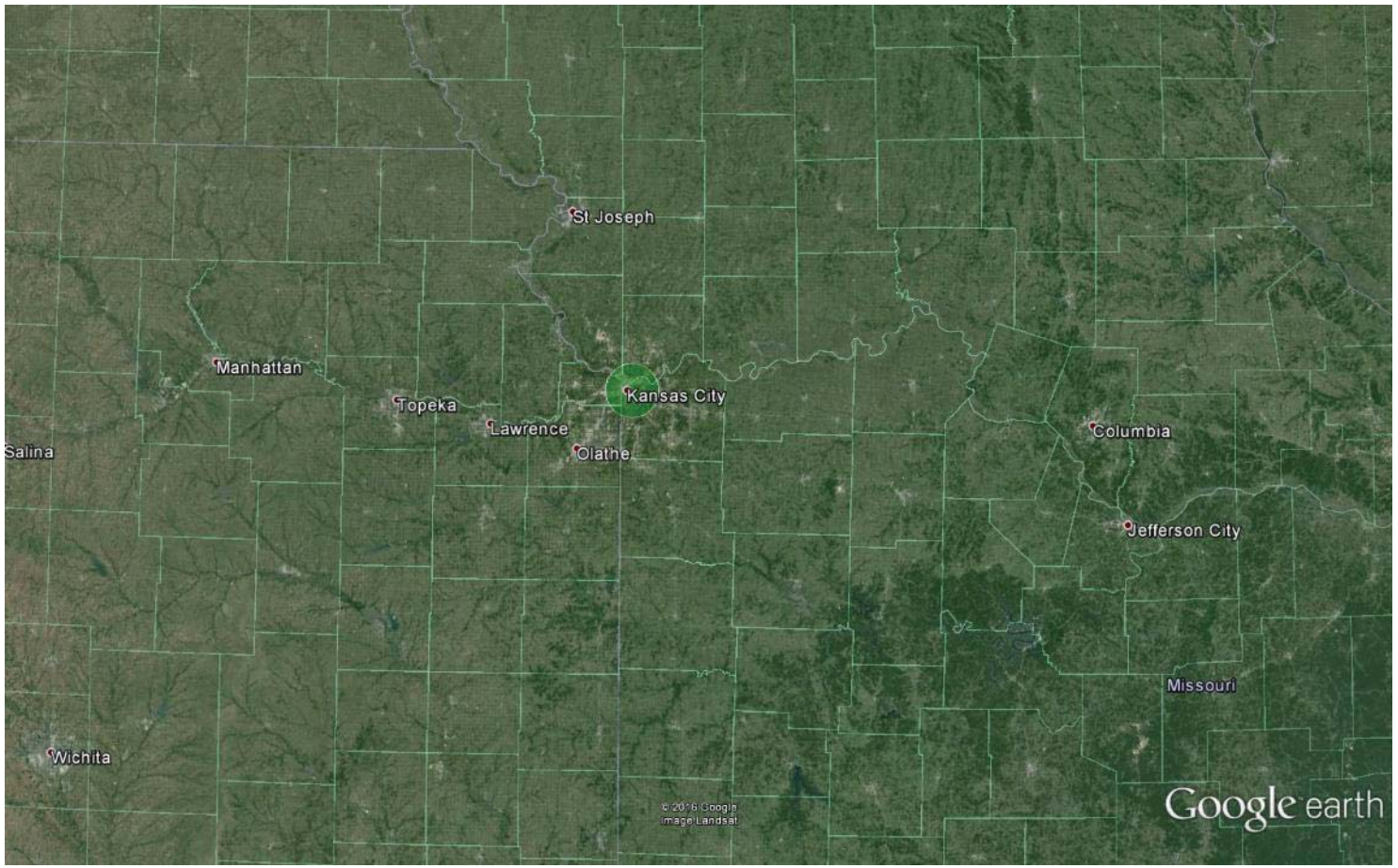
Jacksonville



Kansas City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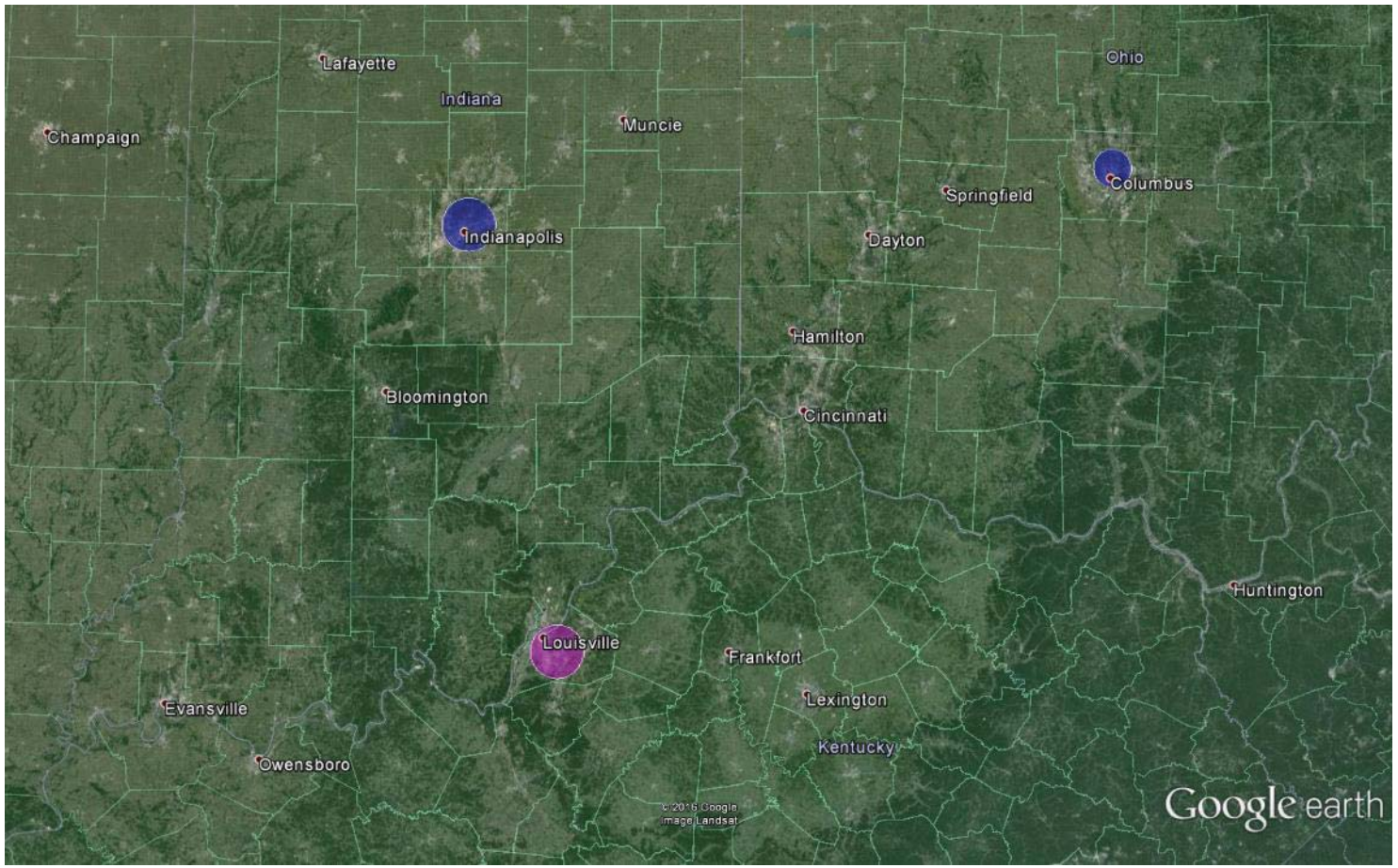
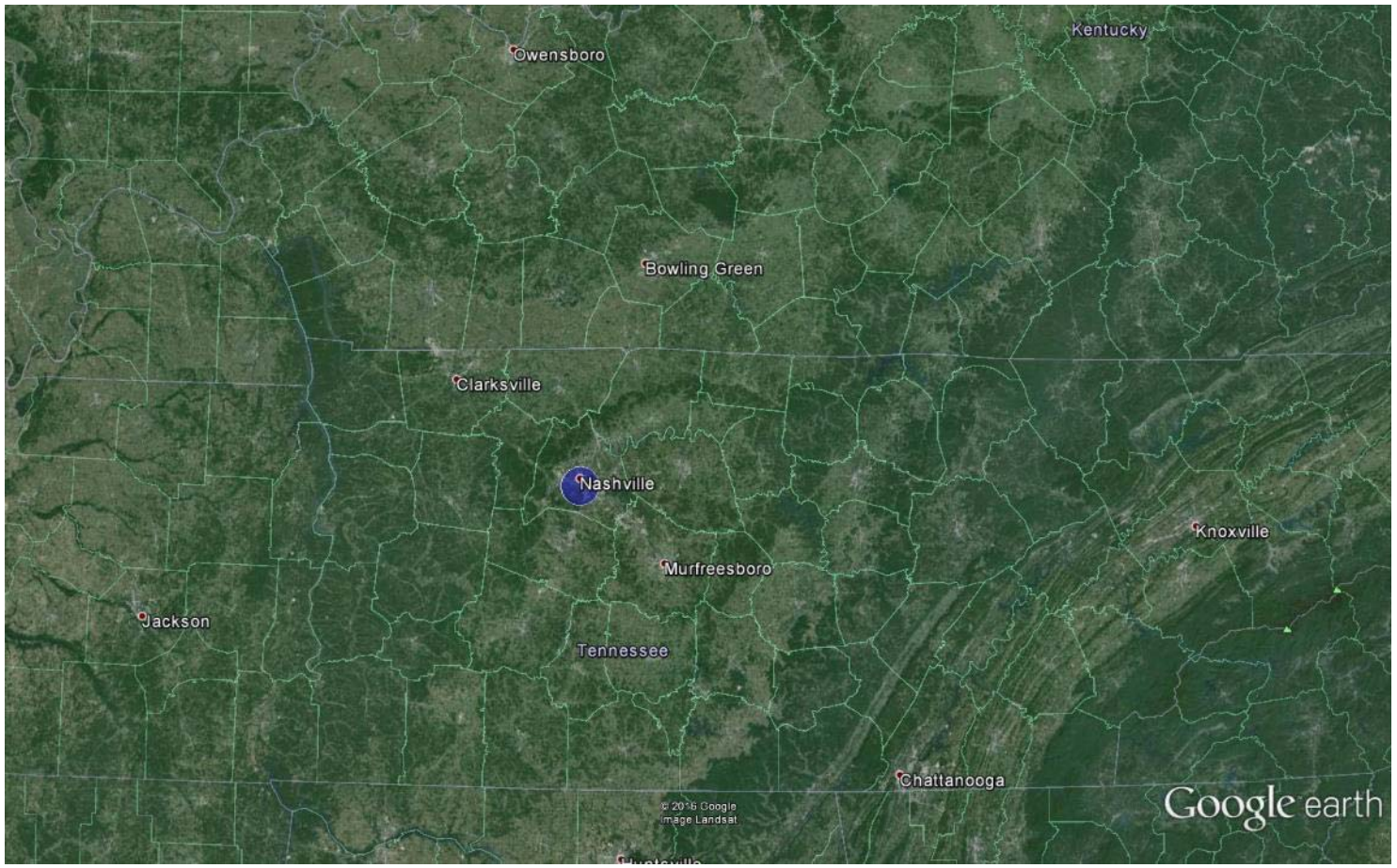
Indianapolis, Columbus, Louisville



Nashville


Kentucky
Owensboro
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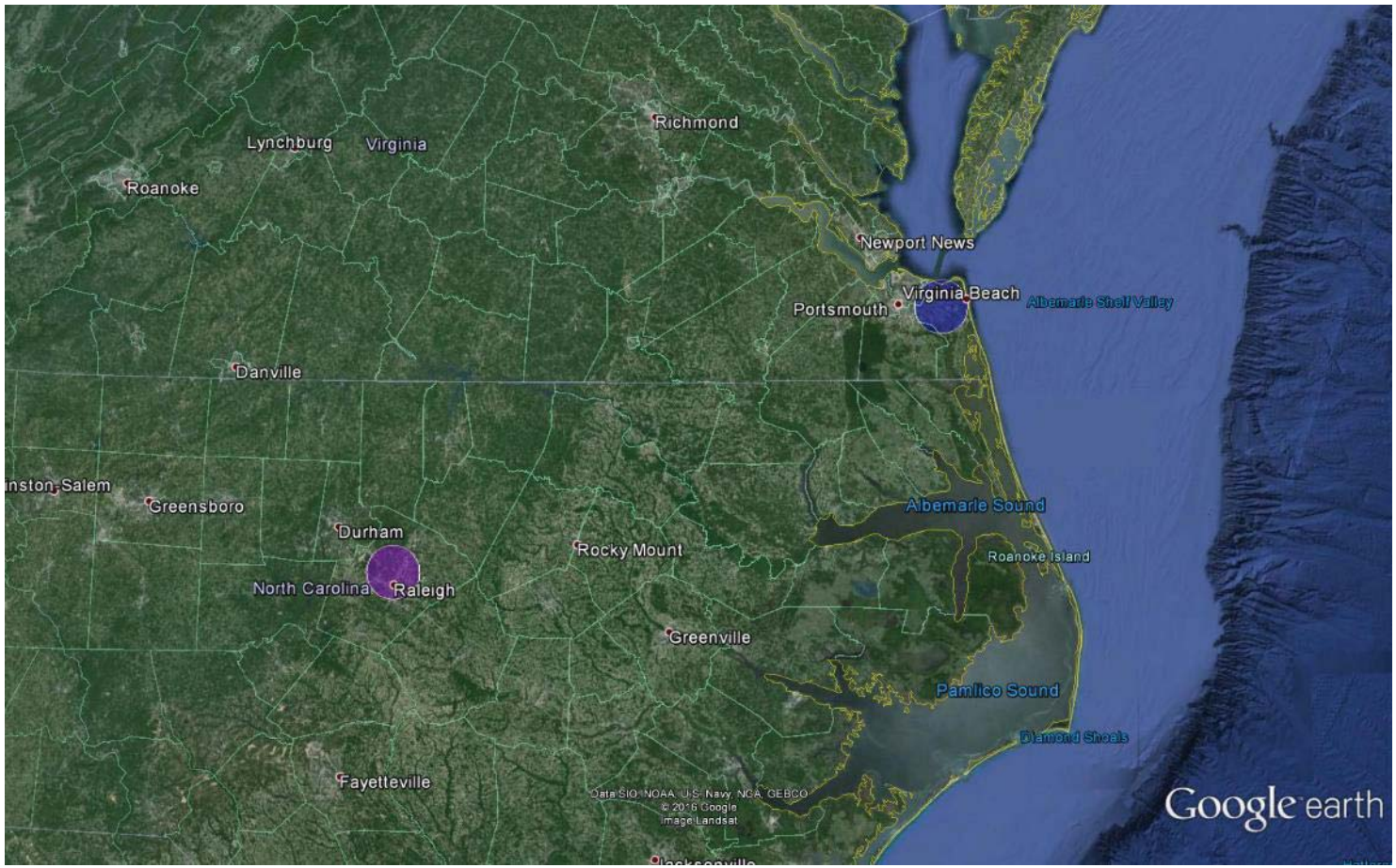
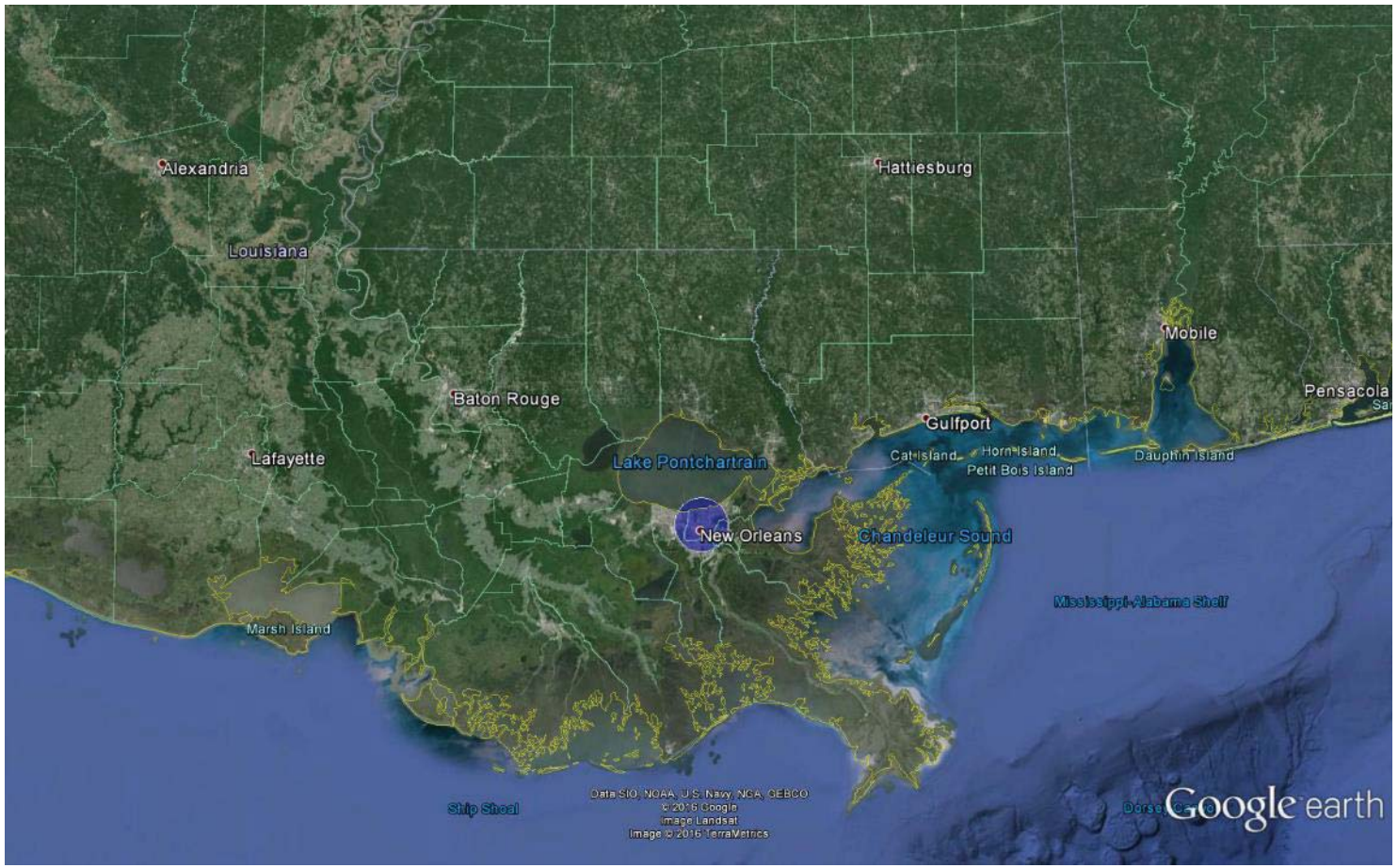
Virginia Beach, Raleigh



New Orleans


Alexandria
Louisiana
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Gulfport
Lafayette
Lake Pontchartrain
Cat Island
Horn Island
Petit Bois Island
Dauphin Island
New Orleans
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Ship Shoal
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